A STUDY ON ANALYSING THE PREVALENCE AND IMPACT OF HEALTH EDUCATION IN PREVENTING SUBSTANCE ABUSE AMONG ADOLESCENT CHILDREN

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In partial fulfillment of the requirements for the degree of
Doctor of Medicine in Paediatrics

Under the guidance of

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CERTIFICATE

This is to certify that this dissertation in **"A STUDY ON ANALYSING THE PREVALENCE AND IMPACT OF HEALTH EDUCATION IN PREVENTING SUBSTANCE ABUSE AMONG ADOLESCENT CHILDREN"** is a bonafide research work done by **DR. K. NEELAKANDAN**, Professor and Head of the Department of Paediatrics , PSG IMSR, Coimbatore in fulfillment of the regulations laid down by The Tamilnadu Dr.M.G.R Medical University for the award of MD degree in Paediatrics

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DECLARATION

I, hereby declare that this dissertation entitled **"A STUDY ON ANALYSING THE PREVALENCE AND IMPACT OF HEALTH EDUCATION IN PREVENTING SUBSTANCE ABUSE AMONG ADOLESCENT CHILDREN"** was prepared by me under the guidance and supervision of **Dr. K.NEELAKANDAN** Professor and Head of the Department of Paediatrics, PSGIMS&R, Coimbatore.

This dissertation is submitted to The Tamilnadu Dr.M.G.R Medical University, Chennai in fulfilment of the university regulations for the award of MD degree in Paediatrics. This dissertation has not been submitted elsewhere for the award of any other Degree or Diploma

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INTRODUCTION

The epidemic of substance abuse among the adult population has assumed alarming dimensions in India. Changing cultural values, increasing economic stress and dwindling supportive bonds are some of the major contributing factors [2]. On past it was considered to be an issue among street children, working and trafficked children, but now it was a vulnerable phenomenon affecting all segments of the society[6].

In the 21st century, India has turned out to be one of the nations most influenced by tobacco-related mortality. It is foreseen that almost 1 million Indians will bite the dust every year from smoking by 2010, with 70% of those death will happen among individuals between the ages of 30 and 69 years. [12]

One of the difficulties in worldwide chronic disease prevention is decreasing tobacco utilize, especially in developing nations like India [12]. In India, the beginning of tobacco products usage usually happens in adolescence, with an expected average of 5500 young individuals starting to use tobacco every day [3]. Any increase in the prevalence of tobacco use will translate to even greater rates of premature disability and death in India [1, 12].

The Global Youth Tobacco Survey tells that globally 3.8% children were smokers and 11.9% were using smokeless tobacco [1]. In the developed world, huge successes in curbing the tobacco epidemic were achieved over the past 40 years due to a mixture of policies and interventions that led to the de-normalization of smoking within the society. Much of the developing world, however, has not shared this success story, but witnessed an escalation in tobacco use instead [1,2].

In India most researches were conducted on lower socioeconomic population such as study done by Bansal, et al. [2], tells 45% street children using varied substances. Most previous studies demonstrate alcohol as the commonest substance used (60-98%) followed by cannabis (4-20%) [3] .

Individuals who begin using psychoactive substances at an early age, typically defined as prior to age 13 or 14 [1,2] are at greater risk of negative psychosocial, educational and mental health outcomes than individuals who initiate substance use at a later age. Psychoactive substance abuse in India continues to be a substantive problem for the individual as well as for the society. One of the foremost essential steps to combat this challenge is to document the extent, patterns and trends of substance abuse to appreciate the magnitude and severity of the problem.

There are various studies conducted in different parts of India on substance abuse, so this study was considered to be done in Coimbatore region to find the prevalence among the adolescent school students and also to find the effectiveness of providing health education among these children.

OBJECTIVE

PRIMARY OBJECTIVE

To assess the prevalence of usage of tobacco and tobacco related products, alcohol and other illicit drugs among adolescent school children, providing health education and reassessing the effectiveness of the programme.

SECONDARY OBJECTIVE

To identify other associated factors due to usage of substances.

METHODOLOGY

BACKGROUND OF STUDY AREA

There are many Indian studies for usage of substances in different states. This study was aimed and finding the prevalence among adolescent school children in Coimbatore city and also providing them health education and assessing its effectiveness**.**

STUDY DESIGN

Epidemiological - Cross sectional study (Quantitative)

STUDY DURATION

November 2017 to October 2018

STUDY PARTICIPANTS:

Students of class 9^{th}, 10^{th}, 11^{th} on one Government aided school and one private school in Coimbatore district.

INCLUSION CRITERIA

All children of classes 9^{th}, 10^{th}, 11^{th} who gave written informed consent.

EXCLUSION CRITERIA

Children who were not available during the day of assessment.

SAMPLE SIZE

A complete enumeration of all students who comes under inclusion criteria were included for the study. Sample size achieved was 400.

SAMPLING METHOD

Convenient sampling.

DATA COLLECTION TOOL

Semi structured and assist based questionnaire.

DATA COLLECTION METHOD:

Students belong to classes 9^{th}, 10^{th}, 11^{th} of 1 private school and 1 government aided school was selected as a study subject. Prior permission from the respective authority on the school was obtained before the commencement of the study. A semi structured and assist based questionnaire in English and Tamil (local language) was provided to all the eligible students. These children were previously explained about the questions on the questionnaire by a principal investigator. The seating arrangement of students were arranged in the way to ensure their privacy during filling the questionnaire. The questionnaire was included with the domains like socio-demographic profile of the subject, types of substances used and patterns of substances use etc.

The questionnaire was collected by the principal investigator after the completion by participants, and maintained confidentially.

After that health education was given by principal investigator about the harms of substances abuse to all the participants of the study.

A same kind of survey was done after one month among the same subjects to measure the prevalence of substance abuse after health education. The data of pre and post intervention was not shared with school management.

DATA ANALYSIS

Data was entered in an excel spread sheet and analysis of data was done by using Microsoft excel and SPSS software with suitable test.

ETHICAL CONSIDERATION

Ethical clearance for the study was obtained from the Institution Ethics Committee. Written informed consent was taken from the study participants before the commencement of the study.

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LITERATURE REVIEW

DRUG ABUSE

The word "drug" is defined as "any substance that, when taken into the living organism, may modify one or more of its functions" (WHO). "Drug abuse" is defined as self-administration of a drug for non-medical reasons, in quantities and frequencies which may impair an individual's ability to function effectively, and which may result in social, physical, or emotional harm [(1)] .

SUBSTANCES AND ITS CLASSIFICATION [(2)]

The term substance refers to legal substances are alcohol, tobacco and other commonly abused drugs like cannabis and opioids, medicinal compounds as tranquilizers and sedatives and chemicals like volatile solvents.

The 1992 International classification of diseases by the world health organization has classified ten classes of psychoactive substances.

- Alcohol – ethyl alcohol is commonly used , some illicit beverages may contain methyl alcohol.
- Tobacco – cigarettes, pipes, beedies and non smoking forms zarda, snuff.

- Opioids: morphine, semisynthetic compounds like heroin, oxycodeine, pethidine and buprenorphine.
- Cannabinoids: products from the plant cannabis sativac like marihuana, bhang and charas.
- Sedatives and hypnotics: barbiturates, benzodiazepines which are used for their sleeping properties.
- Cocaine
- Stimulants: caffeine, amphetamines and methylphenidate.

Hallucinogens: LSD, psilocybin, dimethyl tryptamine. Volatile solvents: Toluene, butane, propane, nitrous oxide

Multiple drug use

PREVALENCE OF DRUG ABUSE IN INDIA

Substance abuse in children is a major problem in India. Children are experimenting with drugs early in their life. Earlier, substance abuse was a problem of street children, working children, and trafficked children, but, today it is widespread among school going children who come from different socioeconomic and educational status. The age of beginning to consume or having the first drug is declining sharply [(3)].

The amount and type of measures taken by family and the state is insufficient to prevent the availability of the substance to children. In India 5500 children start consuming tobacco products daily, and some start early at 10 years of age [3].

The non-medical use of alcohol and other psychoactive drugs has become a matter of serious concern in many countries. While alcohol abuse is an universal problem, the incidence of drug abuse varies from place to place. Prevalence rates of use in students is varied from 5.0% to 56.2 % [2].

Most common substance consumed was nicotine in the form of cigarettes or bidis and gutkha. The other substances were inhalant/volatile substance used in the form of sniffing of adhesive glue, petrol, gasoline, thinner, and spirit [2].

Substantiating the above statement a study was conducted by Ningombam et al on 2011 among higher secondary school students of Imphal, Manipur. This study found that prevalence of substance use was 54%. Tobacco was most commonly used followed by alcohol, cannabis and opiates [4].

The following are the studies conducted in various parts of India showing the commonly used drugs.

Table 1: Commonly used drugs in different areas of India

STUDY	AREA	AGE	YEAR	COMMON DRUGS
Roma S. Dadwani et al [5].	Gujarat	10 years and above	2016	tobacco (38%) followed by alcohol (34%).
Kr. Bharath Kumar Reddy et al [6].	Bangalore	12 to 16 years	2013	alcohol (28%) and glue-sniffing (20.2%),
Vartika Saxena et al [7].	Dehradun District	10th to 12th class	2010	Supari/gutka/pan (57.2%), Cigarette and tobacco(33.1%)
Sachiddananda mohanty et al [8].	Odisha	15 to 19 years	2013	Chewable tobacco and cannabis
D N Sinha et al [9]	Bihar	13–15 years	2002	Tobacco

EPIDEMIOLOGY IN FOREIGN COUNTRIES[10,11]

50.9 percent were binge drinkers and 13.7 percent were heavy drinkers among 12 to 20 years old individuals surveyed in the United States in 2014.

Up to 90 percent of European students aged 15 or 16 years reported of having consumed alcohol. The other illicit drugs which are used are about a Six percent of 12th graders in the United States smoke marijuana daily. The rate of illicit drug usage in countries like Europe among youth aged 12 to 17 was 9.5 percent in 2012. The following table shows the substance use in the united states and Europe.

Table 2: Multinational prevalence rates of substance use and substance use disorders[10].

Use/disorder	Age (years)	United States	Europe
Alcohol use			
Ever	15 to 16	47%	90%
Disorder	13 -14	1.3%	
	17-18	15.1%	
Drug use			
Ever	12-18	40%	20%
Cannabis use			
Ever	12-17		7.2%
Monthly	17-18	14.3%	
Daily	17-18	5.3%	

FACTORS ASSOCIATED WITH A HIGH RISK FOR DRUG ABUSE

There are many correlates and suspected risk factors for alcohol and substance abuse. The following are the certain personal and individual characteristics which are considered as risk factors.

1. Gender [11]

Alcohol disorders and other substance abuse are more commonly seen in men when compared with women. The differences between men and women in usage of these substances are due to various factors like cultural norms, social standards, body size and metabolism of alcohol. These are some reasons due to which the use of alcohol is less among women and lower rates of alcohol addiction are seen in women.

Gender variability may also be because of response to stress. There are also gender differences in response to the usage of drug. Boys are more likely to use illicit drugs when compared with women. A study done in national capital territory by Singh v et al in 30 schools revealed prevalence of smoking more in boys(4.6%) when compared with girls (0.8%)[12].

2. Age[11]

Prevalence of alcohol use decreases with age. The hazard rate of alcohol abuse and dependence for alcohol is approximately at 19 years of age. There is a steady reduction of hazard with increasing age. The age of onset if alcohol use is said to be a predictor of subsequent alcohol abuse and dependence.

Drinking onset is also associated with severity of alcohol dependence symptoms, elevated risk of alcohol related injuries, motor vehicle accidents violence. Early onset of drug use has an increased risk of development of drug use disorders. Smoking at young age is a predictor for increased risk of transmission to alcohol use and dependence.

Highest prevalence and incidence for usage of illicit drugs is commonly seen in late adolescence and young adulthood. Similar to alcohol the prevalence decreases with increase in age. Peak usage of illicit drugs are commonly seen at the age of 19 years. From then there is a sharp decline when they reach the age of 25 and hence the hazard rates are relatively low.

3. Peer influences [3]

Drug Abuse and Addiction, (2017), reported that friends and acquaintances can lead to an increasingly strong influence during childhood. Peers can be the causal factor to try the substance for the first time. Academic failure as well as poor social skills can put a child at further risk for substance abuse. Children who develop early behavioural problems have the risk of developing academic problems and also experiencing rejection from their pre social peers, this will probably lead to connections with deviant peers and in turn engage in other acts such as truancy, substance use, and also indulge in violent behaviour.

A study conducted by Guillen et al, sample of 1023 children, reported that parental monitoring would be able to help in strengthening the resistance to peer pressure and therefore it can be expected to reduce substance abuse in youths [12].

4. Family influences on Substance Abusing Children

Parents and families have the greatest responsibility and lasting impact on children's learning and their development. When child is raised safely, securely he tends to develop good habits and also pursues a good and healthy lifestyle. So when all these fail to happen child may get

tempted and he will be dragged in some bad habits and indulge in substance abuse.

Poor parenting can lead to rejection, lack of parental warmth, parent-child conflict, parental hostility or low attachment, harsh discipline. It may also lead to lack of inconsistent discipline, permissive parenting, inadequate supervision and monitoring, child abuse/maltreatment [3]

Families can have a powerful influence in shaping the attitudes, values, and behavior of children was suggested by Rossow et al [13]. Lack of appropriate care and nurturing, lack of family education, family who are facing separation, homelessness, child of the divorced parent and no proper structure to a home life, often these children revert to substance abuse [14].

Children who have parents, siblings or other family members who indulge in alcohol abuse or other substances are the easiest victims for substance abuse. Usually, friends have a more similar pattern in their use of substance abuse than in any other activity or attitude. Substance abuse by peers may exert a greater influence in them than the attitudes of parents. Parents may be able to limit the influence of peer groups if they are following traditional family roles on children's attitudes towards

substance abuse and therefore parents have a crucial influence on children's behavior [13].

5. Socioeconomic Factors in Substance Abuse Children [2]

The Rapid industrialization, urbanization, and changing lifestyles like both the parents working, and parents working out of a home for long hours are some of the factors. The other problems like mounting poverty, population explosion, these have left children struggling for their survival, forcing many children to substance trafficking and trading and abuse.

6. Psycho-Social Factors and Its Related Risk Factors [2]

During social, cultural and family rituals and other customs, festivals, celebrations, happiness, relaxation, etc. were the practices commonly followed among male members. These reasons led to cause that males were more exposed and, also accepted alcohol consuming. These consequences made them more common victims of substance addiction.

7. Individual risk factors [2]

Children with difficult temperament and have an inflexibility with peers, low positive mood, withdrawal. Irritability in children is a risk

factor in children, other factors like motor, language, and cognitive impairments.

Early aggressive behaviour probably due to stress which leads to the usage of substances. Poor social skills like impulsivity, aggressiveness, and withdrawn or separated from peer groups may lead to the use of substances. Poor social problem-solving skills also leads to low self esteem which makes them to use these drugs.

Following were other few factors associated with a high risk for drug abuse living away from home, migration to cities, relaxed parental control, alienation from family, early exposure to drugs, leaving school early, large urban environments, areas where drugs are sold, traded, or produced certain occupations (tourism, drug production or sale), areas with high rates of crime or vice, areas where there are drug - using gangs, areas where delinquency is common [(1)]

DEPENDENCE PRODUCING DRUG

Drug dependence is a state, psychic, physical resulting from interaction between a living organism and a drug characterized by behavioural and other responses[(1)]. The specific characteristics of dependence varies with the type of drug involved. Psychoactive substance use can lead to dependence syndrome - a cluster of behavioral,

cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state [(1)]. Some of the commonly dependence producing substances are alcohol which causes dependence of about 10% [(2)]. Hazardous drinking was significantly associated with norms and age was found in a study done by Christopher J. Amritage on 2013 [(15)]

The other commonly used drugs which causes dependence is cannabis in which there are 10% daily users and 20-30% become weekly users [(2)]. DSM IV criteria is used in the diagnosis of drug three or more of the following criteria is met during 12 month period of time.

- Need of markedly increased amounts of substance to achieve intoxication.
- Withdrawal syndrome for a substance or the same substance is taken to relieve or avoid withdrawal symptoms.
- Substance was taken in larger amounts and when stopped for sometime lead to withdrawal symptoms.

- Persistent desire or unsuccessful efforts to cut down or control substance abuse.
- More amount of time is spent to obtain the substance.
- Important activities like social, recreational activities given up.
- Continuing use of substance abuse despite the knowledge of having a persistent physical or psychological problem that was exacerbated by substance use [2].

COMMONLY USED SUBSTANCES

ALCOHOL[1]

By pharmacological definition alcohol is a drug and may be classified as a sedative, tranquillizer, hypnotic or an aesthetic, depending upon the quantity consumed. Of all the drugs, alcohol is the only drug whose self-induced intoxication is socially acceptable. WHO document states that alcohol is a psychoactive substance with dependence producing properties that has been widely used in many cultures for centuries. According to current concepts, alcoholism is considered a disease and alcohol a "disease agent".

PHARMACOKINETICS [2]

Alcohol when consumed orally is absorbed rapidly in the small intestine. Its lipid soluble and diffusible. The absorption is delayed by intake of food and milk. Alcohol is uniformly distributed throughout all tissues and tissue fluids. It crosses the placental barrier and is found in all physiological fluids like urine, blood, CSF, breast milk and saliva.

The metabolism of ethanol is catalyzed by alcohol dehydrogenase with zero order kinetics. Acute alcohol intake inhibits hepatic drug metabolism, but repeated intake of alcohol causes metabolism of drug.

PHARMACODYNAMICS [2]

Ethanol is a CNS depressant, it has a descending depression starting from cortex then the cerebellum spinal cord and medullary centers. Hyperactivity and hyperarousal is due to the removal of cortical inhibitory effects. With increasing doses the person passes through all stages of general anaesthesia and may die of respiratory depression.

Loss of consciousness occurs at 300mg/dl of blood concentration. Death occurs at about 400 mg/dl. Alcohol inhibits secretion of antidiuretic hormone and causes diuresis. It also produces dilatation of skin vessels, flushing and sensation of warmth.

CNS effects of alcohol at different blood alcohol concentration [2]

20-30mg/dl - Slowed motor activity and decreased thinking ability

30-80mg/dl - Increased motor and cognitive problems

80-200mg/dl – incoordination, errors in judgement, mood lability

200-300mg/dl- Nystagmus, slurring of speech and blackouts

>300mg/dl - Impaired vital signs and possible death.

CLINICAL FEATURES [2]

The usual age of first time drinking independently of the family is 15 years of age. The period of heaviest drinking is about 18-22 years of age. It is associated with 40% of depressive episodes, associated with attempt to commit suicide or have suicidal ideas. There can also be severe anxiety and insomnia. There can be muscle relaxation, somnolence and intoxicated feelings. Mild anterograde amnesia are common.

Temporary cognitive deficits like problem solving, abstraction, memory and learning. These effects reverse within weeks to months of abstinence. Other common problems are trouble falling asleep and there will be frequent awakenings in the second half of the night.

Fifteen percent develop peripheral neuropathy associated with numbness, decrease vibration and position sense and paraesthesia. Three or more drinks per day increases blood pressure and LDL cholesterol.

ADVERSE EFFECTS [2]

The harmful use of alcohol causes a large disease, social and economic burden in societies. It is characterized by muscle incoordination, blurred vision, tachycardia, slow respiration. Alcohol level of 80mg/dl will produce features of drunkenness. Alcohol related harm is determined by the volume of alcohol consumed, the pattern of drinking, and, on rare occasions, the quality of alcohol consumed.

The harmful use of alcohol is a component cause of more than 200 disease and injury conditions in individuals, most notably alcohol dependence, cirrhosis of the liver, toxic psychosis, gastritis, pancreatitis, cardiomyopathy and peripheral neuropathy. It can lead to folic acid deficiency and increase in RBC size without anemia. Also, evidence is mounting that it is related to cancer of the mouth, pharynx, larynx and oesophagus. Further, alcohol is an important aetiologic factor in suicide, automobile and other accidents, and injuries and deaths due to violence[1]. The latest causal relationships established are those between alcohol consumption and incidence of infectious diseases such as tuberculosis and HIV/AIDS[1].

TOBACCO

Tobacco is in legal use everywhere in the world, yet it causes far more deaths than all other psychoactive substances combined. About 3 million premature deaths a year (6 per cent of the world total) are already attributed to tobacco smoking[(1)]. A study conducted by Akansha Singh et al tells that India has one of the highest tobacco users in the world both in number and relative share. India is one of the fewer countries in the world where prevalence of smoking and smokeless tobacco use are high (37%) [(16)] . Tobacco is responsible for about 30 per cent of all cancer deaths in developed countries. More people die from tobacco related diseases other than cancer such as stroke, aortic aneurysm and peptic ulcer. Young people who take up smoking have been shown to experience an early onset of cough, phlegm production, and shortness of breath on exertion [(2)].

There is evidence that the earlier a person begins to smoke, the greater is the risk of life-threatening diseases such as chronic bronchitis, emphysema, cardiovascular disease, and lung cancer [(2)].

TOBACCO PRODUCTS

Figure 1: Different products of tobacco

Pharmacokinetics [2]:

Nicotine is suspended on minute particles of tar which is quickly absorbed from the lung which is as efficient as IV administration. After inhalation it reaches the brain in 0.8 seconds.

It is absorbed through mucous membranes. The peak plasma concentration of nicotine after inhalation is about 25 to 50 ng/ml. Half life is half an hour to two hours.

PHARMACODYNAMICS [2]

Nicotine causes release of catecholamines in the CNS. It also releases serotonin, ADH, corticotrophin and growth hormone. Sympathetic stimulation occurs in the cardiovascular system. There is vasodilatation in muscles, vasoconstriction of skin, tachycardia and rise in blood pressure. Nicotine increases platelet adhesiveness which leads to the cause of thrombosis. Nicotine also increases the metabolic rate and stopping it causes weight gain. Nicotine has a tolerance level when taken repeatedly over a few hours.

PATHOPHYSIOLOGY [2]

Nicotine when inhaled enters the large surface area of small airways and alveoli and then exits, this then undergoes dissolution in pulmonary fluid pH and is transported to the heart, and then passes immediately to the brain. There two crucial factors that causes nicotine addiction they are, the rate of nicotine absorption and high amounts of nicotine attained. Nicotine increase the extracellular nor adrenaline in specific parts of the brain.

CANNABIS AND ADDICTION [17]

Long-term cannabis use can lead to tolerance to the effects of THC, as well as addiction. Cannabis dependence is the most common

type of drug dependence in many parts of the world, including the United States, Canada, and Australia, after tobacco and alcohol. It is estimated that 1 in 9 cannabis users overall will become dependent. Those who begin using the drug in their teens have approximately a one in six risk of developing dependence. 30Users who try to quit experience withdrawal symptoms that include irritability, anxiety, insomnia, appetite disturbance, and depression [(2)].

A United States study that dissected the National Longitudinal Alcohol Epidemiologic Survey (conducted from 1991 to 1992 with 42,862 participants) and the National Epidemiologic Survey on Alcohol and Related Conditions (conducted from 2001 through 2002 with more than 43,000 participants) found that the number of cannabis users stayed the same while the number dependent on the drug rose 20 percent - from 2.2 million to 3 million [(17)]. Additionally, data from the National Institute on Drug Abuse found that in the United States of America in 1993 cannabis comprised approximately 8% of all treatment admissions, but by 2009 that number had increased to 18% [(17)].In Western and Central Europe, cannabis is a significant public health concern; it has been reported as the primary drug of abuse of 21% of cases in treatment, and 14% of cases in Eastern and Southeast Europe. Further, among users ages 15-19, 83% of patients undergoing drug treatment primarily use cannabis

[17]. Young people are especially susceptible to cannabis addiction. Research from treatment centers in the United States indicates that the earlier drug use is initiated, the higher the risk for abuse and dependence.

In 2006, 10 percent of adults 21 and older who first tried cannabis at age 14 or younger were classified with illicit drug abuse or dependence compared to 2 percent of adults who had first used cannabis at age 18 or older. The early use of more potent cannabis may be driving admissions for treatment of cannabis abuse. In 2006, 82 percent of admissions in individuals under age 18 reported cannabis use at the time of admission. This is compared with 56 percent of those under age 18 who were admitted for alcohol use [17]. Indeed, more than two-thirds of treatment admissions involving those under the age of 18 cite cannabis as their primary substance of abuse, more than three times the rate for alcohol and more than twice for all other drugs combined [17].

CANNABIS AND COGNITIVE EFFECTS [17]

Cannabis use most often begins in teenage years and peaks in the early and middle 20s. Adolescents who use cannabis are at risk for a number of harmful drug-related effects, and larger deficits can be attributed to higher dose and earlier age of use onset. Cannabis-dependent teens show short-term memory deficits as well as delayed recall of visual

and verbal information. Even after six weeks of abstinence, cannabis users do not show significant improvement in short-term memory ability. Importantly, these deficits were not seen in adolescents who use other drugs, suggesting that cannabis has a unique influence on memory and learning. Teens who continue to use cannabis heavily show poorer complex attention functioning as well as slower psychomotor speed, poorer sequencing ability, and difficulties in verbal story memory [17]. Other studies show that long-term heavy cannabis users do show impairments in memory and attention that endure beyond the period of intoxication and worsen with increasing years of regular cannabis use [17].

CANNABIS AND MENTAL ILLNESS

Cannabis use is associated with psychotic symptoms, schizophrenia, anxiety, and depression. When compared with those who have never used cannabis, young adults who began using the drug at age 15 or younger are twice as likely to develop a psychotic disorder, and four times as likely to experience delusional symptoms. This trend persisted in a study examining sibling pairs, thus reducing the likelihood that the association was related to unmeasured genetic or environmental influences [17].

Amphetamines are potent CNS stimulant with sympathomimetic and adrenergic agonist activities[1]. This class of drugs was first

synthesized in the late 19th century that includes amphetamine, dextroamphetamine and methamphetamine[2]. Although amphetamines had been available for research for many years, the first medical application of amphetamine was developed in the 1920s, when it's CNS and respiratory stimulant properties were discovered[2] Amphetamines have been used as a treatment for cold and sinus symptoms obesity, narcolepsy and paradoxically, ADHD. Amphetamines also have a high potential for abuse [18]. Complications of amphetamine were first monitored by US physicians when they prescribed methamphetamine as a treatment for heroin addiction [18]. In case of 15 to 34 year old adults, lifetime prevalence of amphetamines use varies considerably between countries, from 0.1 to 12.4%, with a weighted European average of 5.5% [18].

Study in the school going students aging between 15 to 16 years old, reported lifetime prevalence of amphetamine use ranged from 1 to 7% in the 24 European Union Member States and Norway. Countries like Belgium, Hungary also reported amphetamine prevalence levels of more than 4% [18].

SIDE EFFECTS OF AMPHETAMINE [18]

The side effects of amphetamine are diverse and the amount of amphetamine used is the primary factor in determining the likelihood and

severity of side effects Amphetamine products such as Adderall, Dexedrine, and their generic equivalents are approved by the Food and Drug Administration (FDA) for long-term therapeutic us. Recreational use of amphetamine generally involves much larger doses, which have a greater risk of serious side effects than the dosages used for therapeutic reasons. The physical and psychological side effects of amphetamine are:

PHYSICAL SIDE EFFECTS [18]

Amphetamine stimulates the medullary respiratory centers, producing faster and deeper breaths. In a normal person at therapeutic doses, this effect is usually not noticeable, but when respiration is already compromised, it may be evident. Amphetamine also induces contraction in the urinary bladder sphincter, the muscle which controls urination, which can result in difficulty urinating. This effect can be useful in treating bed wetting and loss of bladder control. If intestinal activity is high, amphetamine may reduce gastrointestinal motility. Amphetamine also has a slight analgesic effect and can enhance the pain relieving effects of opioids.

PSYCHOLOGICAL SIDE EFFECTS [18]

Amphetamine psychosis can occur in heavy users. Although very rare, this psychosis can also occur at therapeutic doses during long-term

therapy. Amphetamine has also been shown to produce a conditioned place preference in humans taking therapeutic doses, meaning that individuals acquire a preference for spending time in places where they have previously used amphetamine.

AMPHETAMINE ADDICTION AND DEPENDENCE [18]

The acute reinforcing effects of amphetamine lead to patterns of drug use that, in epigenetically vulnerable individuals, result eventually in addiction, a state hypothesized to be the result of plastic changes in multiple neural circuits. Unlike the opiates and ethanol, amphetamine does not produce physical dependence. It may not possible to recognize the signs of amphetamine addiction at first, but as the addiction progresses and the effects of amphetamine use set in, the signs of addiction become more and more evident.

Some of the early signs of addiction are tolerance and physical dependence or an urge to use amphetamines.

PREVENTION [2]

There are adverse socioeconomic, legal and health related issues due to substance use disorders and chronic relapsing nature of these disorders make the cure difficult and hence prevention is the most useful approach. Approaches to prevention of drug dependence should have

realistic aims. Over-ambitious hopes of eradicating a drug problem in a short time are likely to lead to policies that are unrealistic and self-discrediting. Changes in culture attitudes and alteration in relevant aspects of the environment can be brought about only slowly

Prevention has been conceptualized into different phases like

- Supply and demand reduction
- Primary prevention
- Secondary prevention
- Tertiary prevention[2]

SUPPLY CURTAILMENT AND DEMAND REDUCTION[2]

It is based on the assumption that controlling the availability of substances can help in decreasing their use. Strategies followed are

1. Measures should be taken to break the cycle of drug production from the source to the consumer.
    - Crop eradication and control
    - Detection of illicit laboratories
    - Alternative development and substitution of cultivation areas
    - Reducing illicit trafficking

2. Dismantling criminal organizations

3. Effective monitoring of sale and dispensing of frequently abused drugs

Demand reduction strategies – Aim to reduce the need or demand of the substance by discouraging and the individuals. Following measures are followed

- Prevention of onset of substance abuse
- Provision of help and encouragement
- Provision of advice and treatment[(2)]

PRIMARY PREVENTION[(2)]

Primary prevention is designed to reach individuals before they have developed substance abuse disorders. The main focus is to provide information and educate various groups within the target population about the psychoactive substances. The following are the some of the strategies which have been followed for primary prevention.

1. INFORMATION DISSEMINATION[2]

This approach assumes that exposure to factual information about adverse sequences of substance use will help in changing the attitudes and will lead to non - substance use.

- Public information through mass media
- Health exihibition
- Seminars
- School programs through guest lectures and educational film

2. AFFECTIVE EDUCATION[2]

This strategy focuses on increasing the self understanding and acceptance by performing activities like values clarification and responsible decision making. It also focuses on improving interpersonal relationship by effective communication, peer counseling and increasing the ability of the individual to fulfill their basic needs.

3. PROVIDING ALTERNATIVES[2]

This strategy aims at providing alternatives to the substances. Music, sports religious activities are some of the common alternatives through which they achieve high. The availability and promotion of other

youth centers, sports and hobby club is helpful in channelizing the energy in more adaptive means.

4. RESISTANCE SKILL TRAINING[2]

This is based on the influence factors like the social, specifically peer influences in the initiation and continuation of substance abuse. This can be achieved by persuading, isolation. This strategy is not only for avoiding the situations which leads them to use the substances but also to deal with challenging situations.

5. HEALTH PROMOTION[2]

This strategy focuses on health promotion, by encouraging healthy lifestyles and reducing other behaviours which are unhealthy. It requires collaborative effort from different agencies and organizations.

6. LEGAL APPROACH[1]

The legal control on the distribution of drugs, when effectively applied has been and remains an important approach in the prevention of drug abuse. Controls may be designed to impose partial restriction or to make a drug completely unavailable. Legislation may be directed at controlling the manufacture, distribution, prescription, price, time of sale, or consumption of a substance.

IMPLEMENTATION OF PREVENTIVE STRATEGIES

1. INSTITUTION BASED[2]

Prevention programs in educational institutions, factories, jails and other places. The implementation can be swift due to pre existing infrastructure and organizations. It can also be delivered at less cost.

2. TARGET GROUP BASED[2]

Its targeted to specific population like women, youth and other groups which have their distinct needs. Usually carried out by non governmental organizations and in voluntary sectors.

3. RISK GROUP BASED[2]

These interventions are targeted on specific groups like childrens of substance abusers, children from broken families, street children, unemployed youth, drivers and commercial sex workers.

4. COMMUNITY BASED[2]

This based on broad based prevention to the entire community. These programs are expensive, difficult to evaluate and implement. Campaigns are conducted through mass media, outreach prevention programs and creating awareness of prohibition of smoking in the public.

ROLE OF SOCIAL MEDIA [19]

Social media use has grown widely over the past decade, and this growth is said to continue [20].

SOCIAL MEDIA ARE INTERACTIVE

Social media sites are more and yet share many same features. Social media can be used by many individuals to share information. Most of the sites have built-in mechanisms to direct approval or disapproval of content.

This multidirectional and user-generated communication about content differentiates social media from traditional mass media and from the earlier days of Internet advertising, when Web sites generally just give content from one thing or posted information about a product [21].

THE CHANGING LANDSCAPE OF SOCIAL MEDIA [19]

To knowhow alcohol-related messages and pictures displayed on social media might influence young people, it is vital to consider the altering landscape of social media.

FACEBOOK AND TWITTER [19]

Facebook and Twitter are among the most-accessed Web sites in the United States, mostly among adolescents and young adults. As of

2013, 77 percent of adolescents used Facebook and 24 percent used Twitter [22] among young adults, the equivalent percentages were 86 percent and 27 percent [23]. As a outcome, any alcohol-related content displayed on these sites has the possibility to reach a large amount of adolescents and young adults. Several features of social media sites can impact this risk of exposure to alcohol content, which includes the formats available for user posts and the options for culture of privacy. These issues are especially relevant given that references to personal drinking could be aimed at individuals below age 21.

INFLUENCE OF SOCIAL MEDIA ON YOUNG PEOPLE [19]

The influence of social media alcohol displays on young people can best be determined using theories that illuminate mechanisms of behavior change. Two classic theories in this respect are Social Learning Theory, which supports the importance of peer influence on behavior, and the Media Practice Model, which supports the role of media choices as influences on intentions and behaviors.

SOCIAL MEDIA INFLUENCE: HEALTH BEHAVIOR AND MEDIA THEORY CONSIDERATIONS

Social Learning Theory posits that adolescents learn both by direct experience and by observation (Bandura 1977, 1986). Previous work has indicated that observation of peers is a major source of influence on adolescent health attitudes, intentions, and behaviors (Keefe 1994; Wood et al. 2004). In particular, early alcohol initiation is determined at least in part by alcohol use by adolescents friends as well as by social network characteristics (Ellickson and Hays 1991; Mundt 2011). Thus, according to Social Learning Theory, observation of peers influences alcohol use intentions and behaviors.

The Media Practice Model states that adolescents choose and interact with media based on who they are, or who they want to be, in that moment (Brown 2000). This model suggests that media users explore information or display content based on experiences or behaviors they are considering, which may lead to reinforcement or advancement of these ideas. Thus, an adolescent who is considering initiating alcohol consumption may choose to watch a movie depicting drinking at a party, which in turn may influence him or her to attend such a party in the future.

Exposure to alcohol or tobacco in traditional media (e.g., movies, television) has been associated with adolescent substance use (Dalton et al. 2003, 2009; Gidwani et al. 2002; Titus-Ernstoff et al. 2008). Social media can combine traditional media exposure to alcohol-related content with peer interactivity (e.g., peer endorsement of specific behaviors), resulting in a potentially even more powerful influence on drinking behavior. For example, adolescents social media ties within and across networks provide many potential paths of influence. These paths may allow the spread of alcohol-related content or promote alcohol behaviors within a network as well as across networks (Mundt 2011). The potential impact of such messages has been demonstrated repeatedly.

Thus, adolescents who view alcohol references on their peers' Facebook profiles find these to be believable and influential sources of information (Moreno et al. 2009a).

Furthermore, adolescents who perceive alcohol use as normative based on Facebook profiles are more likely to report interest in initiating alcohol use (Litt and Stock 2011). Consequently, social media represent a widespread, readily available, and consistently accessed source of information for today's adolescents and young adults and combine the power of interpersonal persuasion with the reach of mass media. Fogg

(2008, p. 23) described “mass interpersonal persuasion” as “the most significant advance in persuasion since radio was invented in the 1890s.”

SOCIAL MEDIA ADVERTISEMENTS

Another possible approach is to use social media for social marketing. In this way, social media could be used similarly to how traditional media outlets have promoted responsible alcohol use and increased awareness of alcohol-related harm. Advertisements could be pegged to the same keywords used by alcohol beverage advertising, with the goal of reaching the same target audiences and providing educational messages or links to online interventions.

SECONDARY PREVENTION

Early detection of those who are already affected by the substance and appropriate treatment. It is done by providing counseling services to motivate them to cease the substance use and various treatment regimens.

TERTIARY PREVENTION

This prevention is done to prevent the progression of the disorder to the point of disability and rehabilitation. Various strategies like medical and technological strategies fall under tertiary prevention.

ROLE OF PEDIATRICIAN ON SUBSTANCE ABUSE [24] [25]

The past three decades have been marked by an increasing recognition of the responsibility of pediatricians to their patients and their patients' families regarding the diagnosis and management of abuse of tobacco, alcohol, and other substances of abuse including prescription drugs. Because of the harmful consequences, substance abuse is an obvious concern for all those who care for infants, children, adolescents, and young adults. When it occurs during pregnancy, it has been associated with an increased incidence of prematurity; congenital defects, including brain damage; and even death.

The pediatrician must be prepared to address this commonplace issue as a part of routine health care, starting with the prenatal visit and continuing as a part of all anticipatory guidance. Familiarity with the extent and nature of drug use, as well as the health and social consequences, has become a necessary part of the body of pediatric knowledge[25,26] The pediatrician should possess or develop the skills necessary to determine which young patients are at risk for substance abuse and chemical dependence and should also be able to offer appropriate prevention or treatment counseling to the child, adolescent, and his or her family, or make a referral to a source where such counseling can be obtained.

PERVASIVENESS OF DRUG USE

The pattern of substance abuse among teenagers has undergone significant change during the past 25 years. Prior to the late 1960s, the abuse of psychoactive drugs and alcohol was predominantly an adult phenomenon. In the late 1960s and early 1970s, substance abuse became widespread among adolescents and, more recently, preadolescents.

Besides alcohol and tobacco, opiates, cocaine, amphetamines, barbiturates, marijuana, hallucinogens, anabolic steroids, prescription and nonprescription medications, and inhalants (volatile substances) are all used and abused by many teenagers and a growing number of preteens [(26)].The use of tobacco and alcohol in this age group not only represents a significant health threat, but also it is considered to be a marker for future use, leading to the use of marijuana and other substances of abuse [(27)]. Recent statistics show a slight decrease among high school students in use of drugs, including alcohol.

Nevertheless, in 1991, 88% of high school seniors had some experience with alcohol; 37% had used marijuana; 18%, inhalants; and 9%, cocaine.10 Alcohol and other drug use is significant in all social strata and ethnic backgrounds. However, the prevalent drug of abuse may vary from community to community [(27)]. The use of licit and illicit drugs may be encountered in the elementary grades and, with advancing age,

there is a progressive increase in both the number of users, frequency of use, and increasing variety of use [26].

It is crucial that pediatricians be able to evaluate the nature and extent of tobacco, alcohol, and other drug use among their patients and initiate appropriate counseling or referral for those at risk.

MAXIMIZING THE PEDIATRIC EVALUATION [24]

Inquiry into age-appropriate psychosocial history, such as family and peer relationships, academic progress, nonacademic activities, behavior, acceptance of authority, degree of self-esteem, and ongoing or past intra familial or extra familial episodes of child abuse, may reveal risk factors for future or present substance abuse. This should be a part of every history when a patient who is of grade-school age or older presents for periodic health care. Confidential inquiry regarding the extent of tobacco, alcohol, and other drug use of peers and family should be a part of the routine history of every child in the upper elementary grades who is seen for periodic health care.

This questioning should be followed by a discussion of the possible consequences of such use with the child and his or her parent or guardian. This discussion may reveal a positive family history of chemical dependence or addiction, which is a risk factor [27]. This will also demonstrate that the physician is knowledgeable, interested in, and

prepared to deal with matters of substance abuse. Consequently, if problems arise in this area later, the child and the parent or guardian will be aware of the physician as a resource. Inquiry regarding the extent of tobacco, alcohol, and other drug use, as well as sexual activities [27], should be a part of the routine history of every teenager presenting for periodic health care. Sexual activity in teenagers can be a significant associate of other health-endangering behaviors [28]. It is frequently helpful to begin with inquiries regarding the attitude toward use of tobacco, alcohol, and other drugs within the adolescent's environment.

Pediatricians have a valuable and responsible status position with their patients, their patients' families, and within the community. Anticipatory guidance, along with appropriate counsel and referral, may lead to prevention and reduction in the morbidity and mortality rates related to substance abuse. In addition, the pediatrician should be available to schools, school-based clinics, and community agencies to promote substance abuse prevention in the community. Pediatricians, as patient advocates, often may intervene when no one else can or will. Increased knowledge regarding diagnosis and treatment is basic and mandatory in dealing with substance abuse. The pediatrician's personal and confidential relationship with the patient may well be the essential catalyst in the achievement of meaningful results.

RESULTS

Study was conducted in two schools in Coimbatore city, students were allotted from classes nine, ten and eleven from one government aided school and one private school. About 400 subjects were involved in the study and the age distribution of these children is shown in table 3.

Table.3: Age distribution of subjects enrolled in the study. n = 400

Age (In completed years)	Percentage
13	4 (1%)
14	144 (36%)
15	120 (30%)
16	132 (33%)

Table 3 shows the age distribution of the subjects enrolled in the study. 4 (1%) students were on the age group of 13 years, 144 (36%) students were on the age group of 14 years, 120 (30%) subjects were on the age group of 15 years and 132 (16%) subjects were on the age group of 16 years.

Gender distribution showed more of male children when compared with female children in these school children. The distribution is shown in table 4.

Table.4: Gender distribution of the subjects enrolled in the study.

n = 400

SEX	PERCENTAGE
Male	223 (55.8%)
Female	177 (44.25%)

Table.4 shows the gender distribution of the subjects enrolled in the study. 55.8% and 44.2% of participants were male and female children respectively.

Students were enrolled in the study were from classes nine, ten and eleven. They were more or less equally distributed. Table 5 depicts the distribution of children in different classes.

Table.5 : Class of the study subjects. n = 400

CLASS	PERCENTAGE
9^{th}	145 (36.25%)
10^{th}	121 (30.25%)
11^{th}	134 (33.5%)

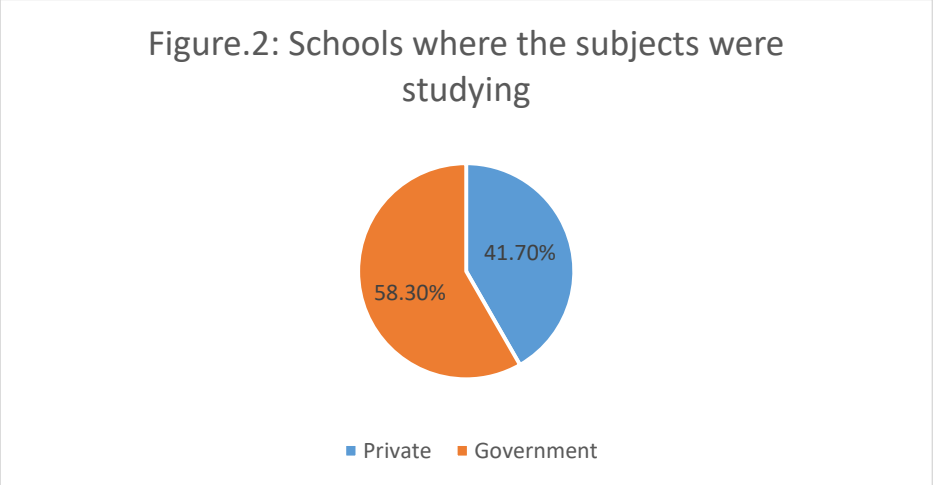
Table 5 shows the class were the subject studying during the research. More students were from the class ninth (145), followed by eleventh (134) and tenth (121).

Children enrolled in the study were from two schools in Coimbatore city, one school was government aided and the other was a private school. Students were more in number from the government school, shown in table 6.

Table.6: School where the subjects were studying. n = 400

SCHOOL	PERCENTAGE
Private	167 (41.75%)
Government	233 (58.25%)

Table 6 and figure 2 shows the schools of the study subjects. 58.3% of students were studying in Government school and 41.7% of students were studying in private school.



About 400 children were enrolled in the study and they were given a questionnaire to fill. The study subjects were asked for the sources through which they came to know about these substances, television and movies were the most common sources, shown in table 7.

Table 7: Modalities through which children were exposed to substances.

MODALITIES	CHILDREN (N - 400)	PERCENTAGE
Television	167	41.8
Internet	43	10.8
Movie	155	38.8
Friends	20	5
Parents	15	3.8

Table 7 shows the modalities through which children had the opportunity get exposed to these substances. TV was the highest with 41.8% followed by movies which were 38.8%

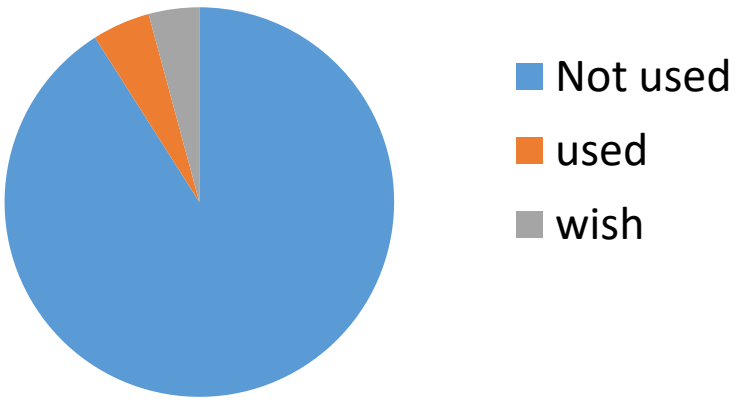
Among the 400 subjects involved in the study there were about 19 students who had used these substances and about 17 children who had the wish to use them shown in table 8.

Table 8: Usage of substances among the study subjects

SUBSTANCE USAGE	CHILDREN (N - 400)	PERCENTAGE
Used	19	4.8%
Had the wish to use	17	4.2%
Not Used	364	91.0%

Table 8 and Figure 3 shows the children who had used the substances and had the wish to use the substance. 4.8% had used the substance and 4.2% had the wish to use the substance.

Fig 3: Usage of substances among the study

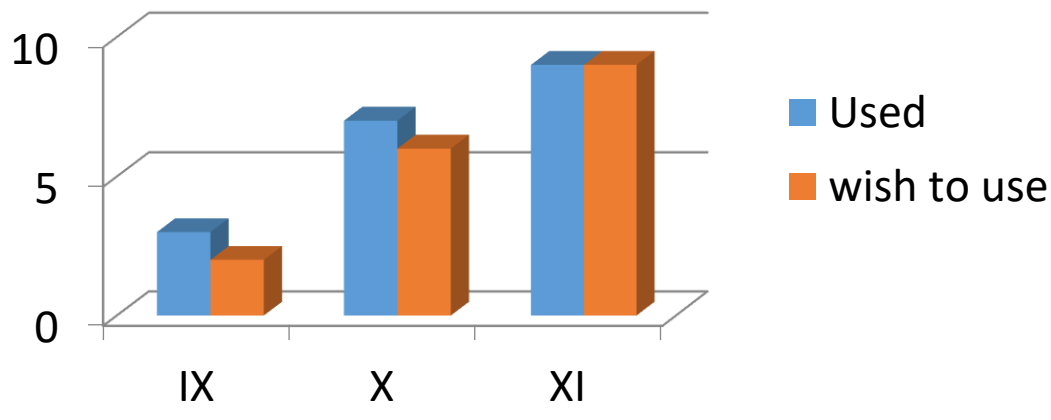


Substance use was seen in all classes. There were about 19 children using substances of the 400 participants. Table 9 and figure 4 shows the distribution of children using substances and who had the wish to use these substances in different classes. Class XI children had more number of children using substance when compared to other classes.

Table 9: Children who used or had the wish to use these substances in different classes.

CLASS	USED	WISH TO USE	NOT USED
IX (145)	3	2	140
X(121)	7	6	108
XI (134)	9	9	116

Fig 4: Children who had used or had the wish to use substances in different

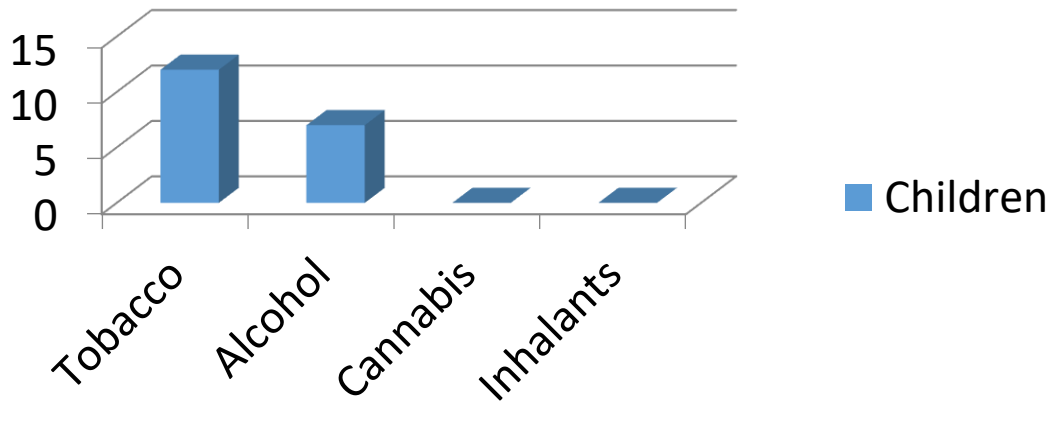


There were about 19 children who accepted the usage of substances of the 400 children who participated. Table 10 and figure 5 shows the common substances used among the study subjects. Tobacco (3%) was commonly used among these subjects followed by alcohol (1.8%)

Table 10 : Substances which were used by the study group

SUBSTANCE	CHILDREN (N - 400)	PERCENTAGE
Tobacco	12	3.0%
Alcohol	7	1.8%
Cannabis (ghanja)	0	0
Inhalants(Nail polish, whitener)	0	0

Fig 5: Substances which were used by study group



Substances were used by children of all classes. Of the 145 children of Class IX 3 children had used, of the 121 students of class X 7 children had used and of the 134 students of class XI 9 children had used substances. Tobacco was the most commonly used in all classes. Cannabis and inhalants were not seen to be used in these children. Shown in table 11 and figure 6.

Table 11: Substances used by children in different classes

SUBSTANCES	Class IX(145)	Class X(121)	Class XI(134)
Tobacco	2	4	6
Alcohol	1	3	3
Cannabis	0	0	0
Inhalants	0	0	0

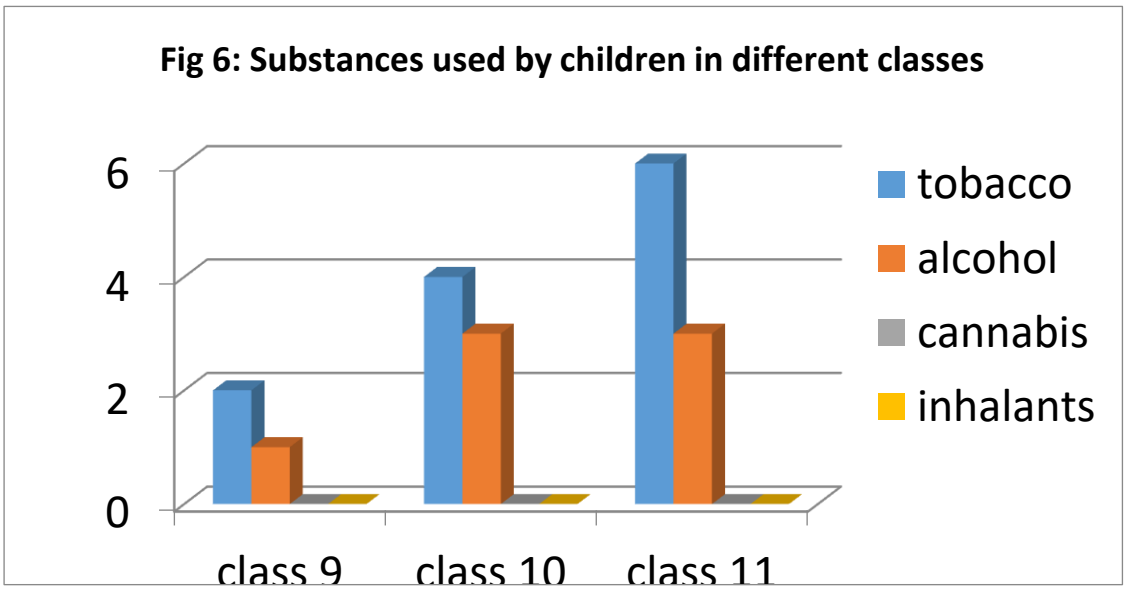


Table 12 shows the class at which these 19 children first started using their substance. Of the 19 children 8 were seen to have started their usage from class X followed by 6 of them in class XI

Table 12: Class at which substance was started at first

CLASS	CHILDREN (N - 400)	PERCENTAGE
VIII	2	0.5%
IX	3	0.8%
X	8	2.0%
XI	6	1.5%

19 children have been using substances and these children were asked for the substance which they first started using. Table 13 shows the substance which these 19 children first started using, of which tobacco was the first started substance in 12 children followed by alcohol used by 7 children.

Table 13: The first substance used by children who admitted substance use

SUBSTANCE	CHILDREN (N - 19)	PERCENTAGE
Tobacco	12	3.0%
Alcohol	7	1.8%
Cannabis (ghanja)	0	0
Inhalants(Nail polish, whitener)	0	0

Table 14: Substances which were used first by children who admitted substance use in different classes

SUBSTANCES	CLASS IX(3)	CLASS X(7)	CLASS XI(9)
Tobacco	2	4	6
Alcohol	1	3	3
Cannabis	0	0	0
Inhalants	0	0	0

Table 14 shows substances which were used first by children who admitted substance use in different classes. Tobacco was more commonly used first substance followed by alcohol

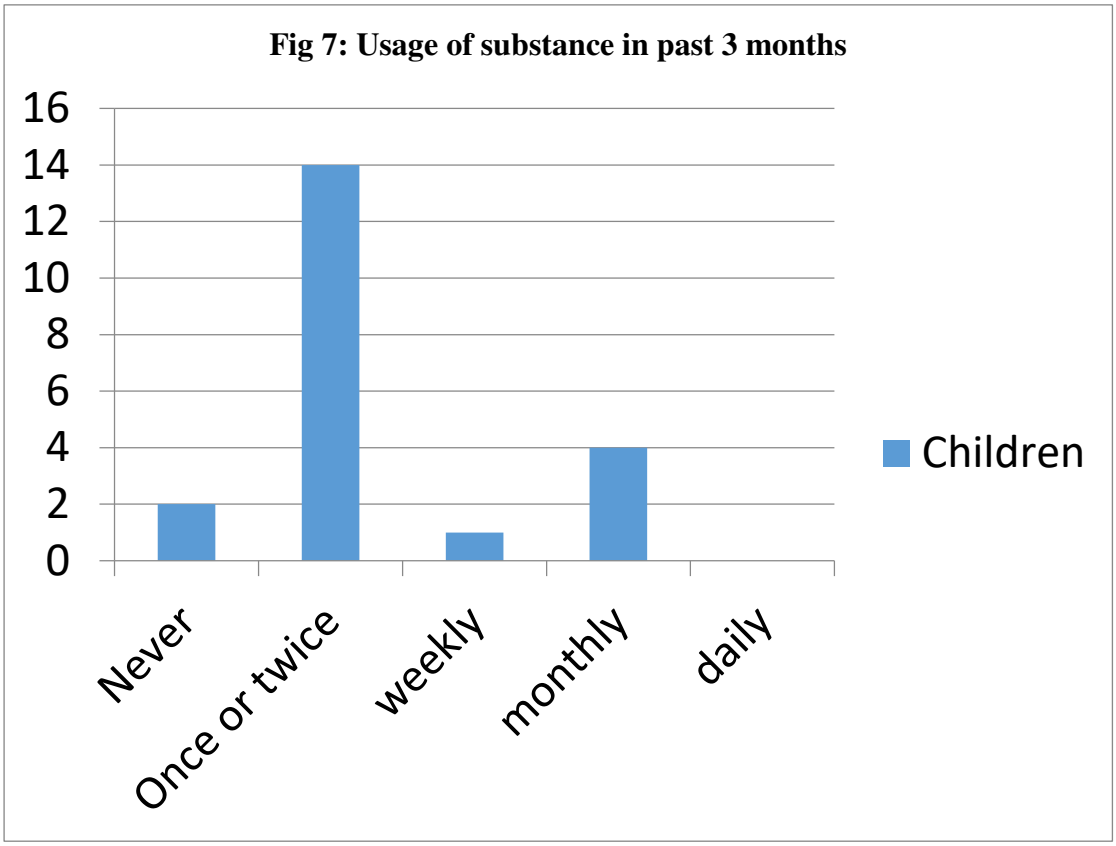
Children who were using the substances were assessed for the frequency of their usage. They were assessed for the usage of the substance in the past 3 months, of the 19 children who were using substances their frequency of usage were once or twice in past 3 months.

Table 15: The usage of substance in past 3 months

USAGE OF SUBSTANCE	CHILDREN (N - 19)	PERCENTAGE
Never	0	0
Once or twice	14	3.5%
Weekly	1	0.2%
Monthly	4	1.0%
Daily	0	0

Table 15 and figure 7 shows the frequency of usage of substances among the 19 children who were using substances. Most of the children were using substances once or twice in the past 3 months.

Fig 7: Usage of substance in past 3 months



Children were assessed for their urge to use the substances which they had previously used. Of the 19 children about 12 children had the urge to use these substances once or twice. About 4 children had the urge to use these substances atleast once in a month and 2 of them wanted to use once in a week this is depicted in table 16.

Table 16: Children who are using substances and had the urge to use of substance in past 3 months

USAGE OF SUBSTANCE	CHILDREN (N - 19)	PERCENTAGE
Never	1	0.2%
Once or twice	12	3.0%
Weekly	2	0.5%
Monthly	4	1.0%
Daily	0	0

The ill effects due to use of substances were assessed among these 19 children who were using substances. They were assessed whether these children had health related issues. Of the 19 children 14 had health related issues once or twice due to use of substances.

Table 17: Children who health related issues due to use of substance in past 3 months

USAGE OF SUBSTANCE	CHILDREN (N - 19)	PERCENTAGE
Never	5	1.2%
Once or twice	14	3.5%
Weekly	0	-
Monthly	0	-
Daily	0	-

Table 17 shows children who had health related issues due to use of substances. Of the 19 children who used substances 14 Children had health issues once or twice and 5 had no health issues

Table 18: Children who failed to do their homework due to use of substance in past 3 months

USAGE OF SUBSTANCE	CHILDREN (N - 19)	PERCENTAGE
Never	4	1.0%
Once or twice	15	3.8%
Weekly	0	-
Monthly	0	-
Daily	0	-

Table 18 shows children who failed to do their homework due to use of substances. Of the 19 children who were using substances, 15 children failed to do their work once or twice, 4 children never failed.

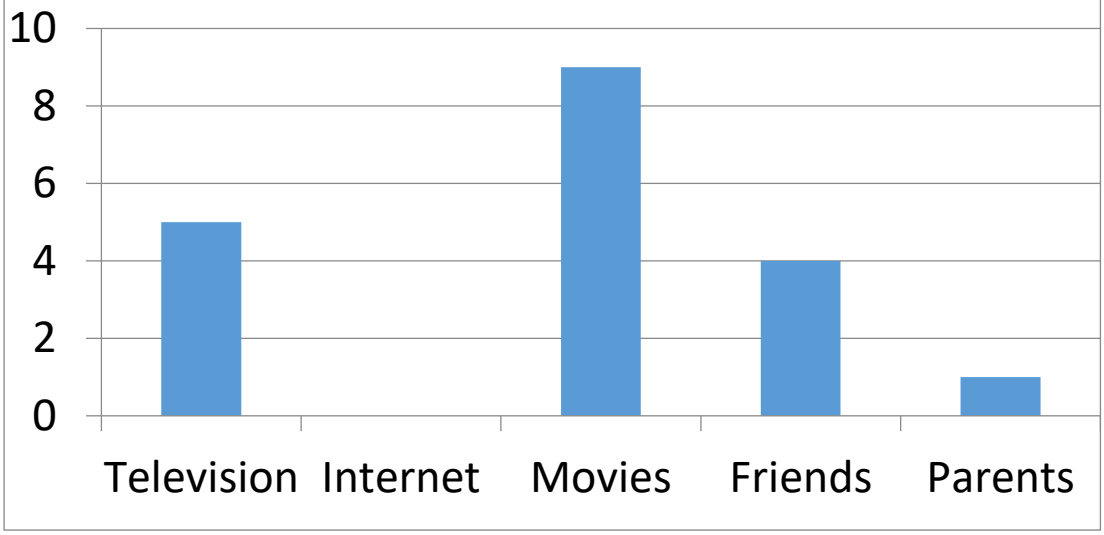
19 children who were using substances were asked for their source of influence for starting these substances. The most common influence were movies followed by television.

Table 19: Sources of influence of children already using substances

SOURCES	CHILDREN (N - 19)	PERCENTAGE
Television	5	1.2%
Internet	0	-
Movies	9	2.2%
Friends	4	1.0%
Parents	1	0.2%

Table 19 and figure 8 shows the sources which were the main influence for these children to start substance use. Movies (9) were highest followed by television (5) and friends (4)

Fig 8: Sources of influence of children already using substances



Children using substances from different classes were assessed for their source of influence. Table 18 shows the source of influence in different classes

Table 20 : Sources of influence of children already using substances in different classes

SOURCES	CLASS IX (3)	CLASS X (7)	CLASS XI (9)
Television	1	2	2
Internet	0	0	0
Movies	2	3	4
Friends	0	1	3
Parents	0	1	0

Table 20 shows main influence to start substance use in children of different classes. Influence because of movies were more in all classes.

Children were assessed whether they tried stopping the usage of these substances and failed, so that they can be provided help. Of the 19 children about 14 children tried stopping in the past 3 months and 3 children have been trying to stop for the past 1 year. Table 21 and figure 9 depicts children trying to stop and failed.

Table 21: Children who tried to stop using substances and failed

TRIED STOPPING	CHILDREN (N - 19)	PERCENTAGE
Never	2	0.5%
In last 3 months	14	3.5%
In last 1 year	3	0.8%

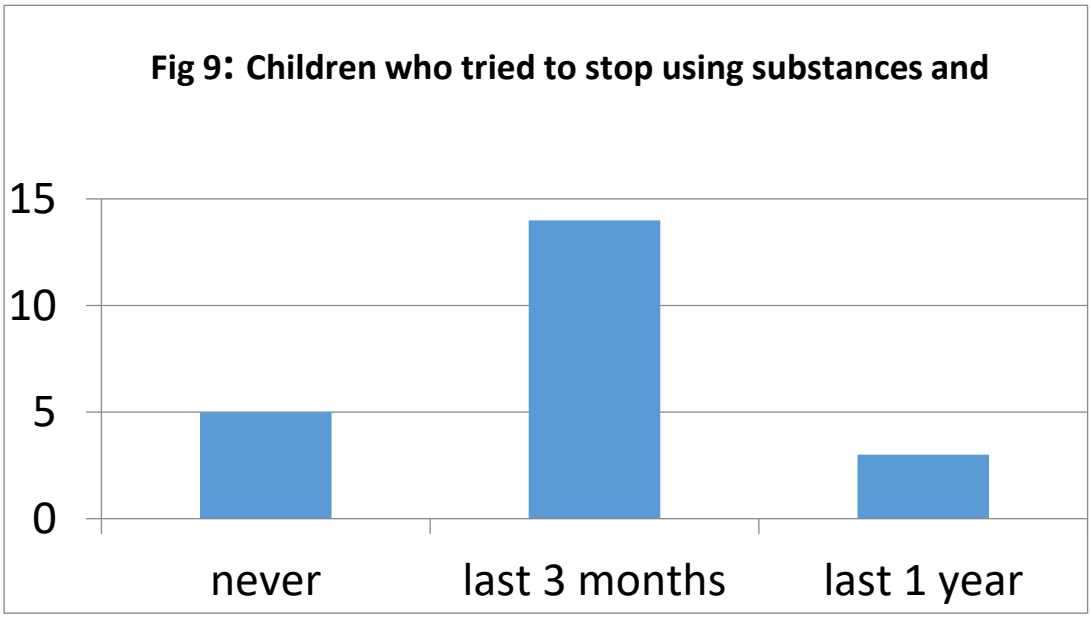


Table 22 depicts the children of different classes who have tried stopping the usage of substances and failed to do so. More number of children have been tried to stop using these substances in the past 3 months and failed to do so.

Table 22 : Children who tried to stop substance use and failed in different classes

TRIED STOPPING	CLASS IX (3)	CLASS X (7)	CLASS XI (9)
Never	0	1	1
In past 3 months	3	5	6
In past 1 year	0	1	2

Table.23: Age related usage of substance in children

CATEGORIES		STUDENTS	ALCOHOL CONSUMPTION	TOBACCO USAGE
Age (In completed years)	13	4 (1)	0 (0)	0 (0)
	14	144 (36)	1 (0.25)	2 (0.5)
	15	120 (30)	3 (0.75)	4 (1)
	16	132 (33)	3 (0.75)	6 (1.5)

Table 23 and figure 10 shows age related usage of substance in children. More number of children have used these substance at the age of 16.

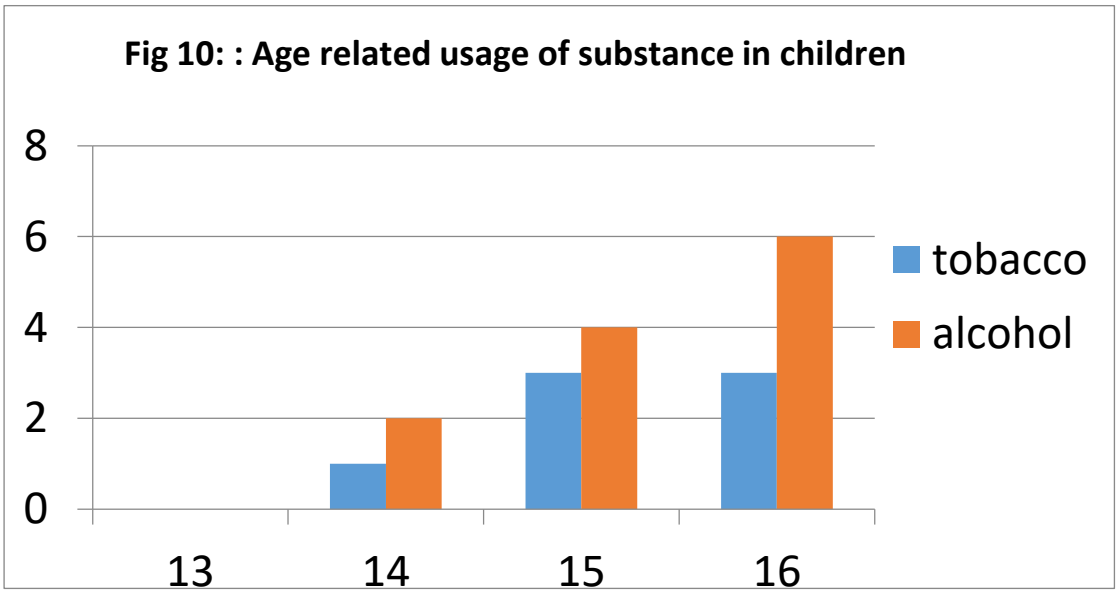


Table 24: Gender related usage of substance in children

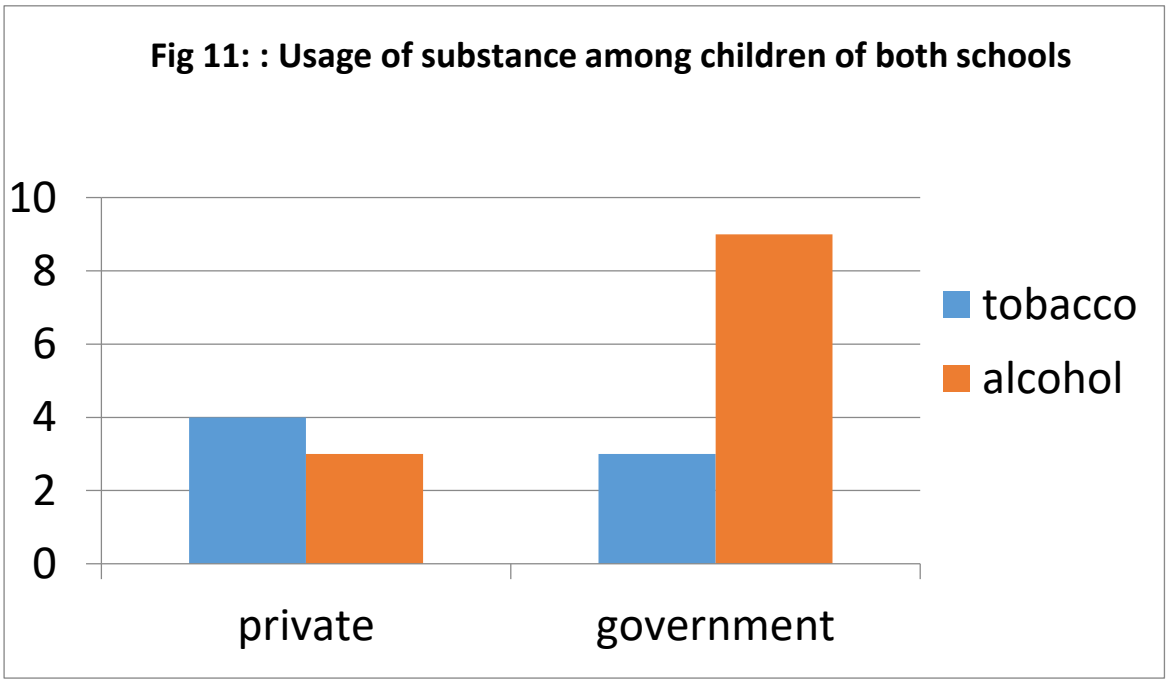
CATEGORIES		STUDENTS	ALCOHOL CONSUMPTION	TOBACCO USAGE
Sex	Male	223 (55.8)	7 (1.75)	12 (3)
	Female	177 (44.25)	0 (0)	0 (0)

Table 24 shows gender related usage of substance in children. Usage of substances were seen more in male children and there were no usage among female children.

Table 25: Usage of substance among children of both schools

CATEGORIES		STUDENTS	ALCOHOL CONSUMPTION	TOBACCO USAGE
School	Private	167 (41.75)	4 (1)	3 (0.75)
	Government	233 (58.25)	3 (0.75)	9 (2.25)

Table 25 and figure 11 shows usage of substance among children of both schools. Usage of substance were seen more among government school children.



The study subjects were on the age group of thirteen to sixteen and among them 55.8% and 44.2% of male and female subjects respectively. Subjects were almost equally distributed on 9^{th}, 10^{th} and 11^{th} standard classes. 41.7% of the subjects were studying in Government school and 58.3% in government aided private school.

These children were given a questionnaire which consists of about 12 questions which has to be answered by these children. Following the questionnaire they will be given health education with power point presentation and audio visual for about 20 minutes. These children were reassessed after one month of time following the health education. Reassessment had a questionnaire which will be answered. The results of post intervention is depicted in table 24. About 19 children of the 400 students were using substances before the intervention. Post health education there were about only 4 children who were still continuing the usage of substances.

POST INTERVENTION

Table 26: Association between substance abuse with before and after health education.

		Before health education	After health education	P value
Substance abuse	Present	19 (4.8)	4 (1)	**0.001**
	Absent	381 (95.3)	396 (99)	

Table 26 shows the prevalence and association between substance abuse with before and after intervention. The prevalence of substance abuse was reduced from 4.8% to 1% after health education to the subjects. The prevalence of substance abuse among the study subjects was significantly less (p value – 0.001) after the health education program given by the principal investigator.

DISCUSSION

Several studies have indicated that schools and their social actors are one of the main places to establish positive choices for health and prevention, as well as to promote changes in potential unhealthy, risky behaviors and life styles [23,26].

There are several studies on prevalence of substance abuse among school children from most parts of India. Our study was aimed at finding the prevalence among the adolescent school children in Coimbatore region. We also provided the children health education to these children and the effectiveness of health education was also assessed.

DEMOGRAPHIC DISTRIBUTION

AGE

Our study population were adolescent school children who were more than or equal to 13 years. There were more or less an equal distribution among the children mostly belonging to the age of fourteen(33%), fifteen(30%) and sixteen(36%).

GENDER

Our study had more of male children (55.8%) when compared to the female children (44.2%)

CLASS AND SCHOOL

There were more or less equal distribution among the classes in our study. The children belonged to classes IX, X and XI. About 36.2% of class IX, 30.2% of class X and 33.5% of class XI children were enrolled in the study. These children were taken from one private and one government aided school. Students were little more in number in government aided school (58.2%) compared to private school children.

IDEA AND EXPOSURE

Almost all children involved in the study had the idea of substances used by the adults. Various sources like television, movies , internet, friends and parents were the causes for them to know about these substances. Television (41.8%) and movies (38.8%) were the more common causes of exposure. About a 5% of their friend and 3.8% of their parents were using these substances.

USAGE AND PREVALENCE

There were about 400 students who participated in the study of which there were about 19 children who accepted their usage and seventeen of them had the wish to use these substances. About 364 students said they didn't use these substances. There were less number of subjects who accepted their usage and this would probably be because

this study was self- reporting. The total prevalence of substance use were 4.8% among which usage of tobacco (3.0%) and alcohol (1.8%) were the only used substances. Tobacco usage were little high when compared to alcohol. The same was seen in a study conducted in Manipur by Ningobam et al[9]. Other substances like cannbis and inhalants were not used. The prevalence of tobacco usage among school students was 4%, in a study conducted by KR Bharath kumar reddy et al which was similar to our study[5]. The usage of substances were increased as the age and class increased. Only male children were using substances and there were no female children who used substances.

PATTERN OF USE

Children started the usage of substances for the first time from class VIII and more number of children were seen in class X. The substance first used by most of children were tobacco. Children used these substance once or twice in the past 3 months. They have also had the urge to use these substances once or twice in the past 3 months.

ILL EFFECTS OF USE

Children who were using substances accepted that they had health related issues due to the use of substances once or twice in the last 3 months. Other problems which are seen due to substance abuse is school

absenteeism. Successful schooling is by engaging students and making sure they come to school regularly. A child who missed school frequently can be adversely affected academically and perform poorly in their examinations. American Psychiatric Association defines abuse of alcohol or alcoholism as drinking that interferes repeatedly with physical, personal or social well-being. So a student who is absent at school because of drunkenness is said to have abused alcohol [32]. Shehu and Idris (2005) have indicated in their study that the poor performance observed in smokers which was because of persistent absenteeism which was found to be high among smokers than non-smokers[31].

The adolescent children who participated in this study also felt that they failed to do their homework which was normally expected to be done by them. This can lead to poor scholastic performances due to use of substances. The use of substance has a great association with mental distress and this consequently can lead to mental distress which affect the students academic performance negatively.

Students who had the habit of smoking had significantly high risk of poor academic performance as compared with non-smokers. Smoking is a high risk for drinking behaviour, and high risk sexual behaviour. These complex interactions with other risky behaviours make smoking the important predictor of poor academic performance. Drinking alcohol

also had significant and negative association with the academic performance. Alcohol clouds judgment and also can make the student be careless about Academic and other success issues [33]

Usage of substances can also lead to behavioural disorders. The most commonly seen manifestations are depression, anxiety, psychotic disorders. Delerium tremens is most commonly seen during alcohol withdrawal. Other behavioural changes are paranoid delusions, sleeplessness, restlessness, fear and confusion. Cannabis can lead to anxiety, paranoid symptoms and recurrence of schizophrenic symptoms. Frequent substance use can lead to dependence to the drug [2]

INFLUENCE

The main influence of substance use in children who are using substances were more due to the influence of movies and their favourite actors usage. The other reasons were television followed by friends.

HEALTH EDUCATION AND POST INTERVENTION

The children were provided health education after the questionnaire session and they were reassessed again with a questionnaire. The health education consisted of videos and presentations. Post intervention which was done after a month showed a study done by

Jong-Long guo et al, says that a drug prevention program through planned behaviours may have effective reaction on reducing drug use [13]. Similarly a study done by Fabrizio et al on effectiveness of school based substance abuse prevention program states that intervention program on school children for alcohol abuse shows positive outcome among the study subjects [18]

CONCLUSION

In this study we conclude that prevalence of tobacco use and alcohol use were more among adolescent school children and providing health education to prevent substance abuse is helpful in reducing the usage of substances among adolescent school children.

LIMITATIONS

One of the main limitations of this study is that all measures assessed were self-reported, which could result in underreporting of substance abuse and it was an anonymous study.

The other limitation was a small sample size and this study was conducted in only two schools.

BILIOGRAPHY

1. **Parks.** textbook of preventive and social medicine.

2. **Vyas, JN.** textbook of postgraduate psychiatry. s.l. : Jaypee , 3rd edition, 2016, 105-220.

3. Substance Abuse among Children: A Rising Problem in India. **Bhawani, Mr, et al., et al.** 1, Research Article The International Journal of Indian Psychology, Vol. 5, pp. 2349-3429. 10.25215/0501.020.

4. Prevelance of pattern of substance use among high school children, Imphal, Manipur. Ningombam et al,2011,24(1),

5. Prevalence of substance abuse: a community based study. **Dadwani, Roma S.** Gujarat : s.n., 2016.

6. Substance Abuse in Urban School Going Adolescents in India: A Growing Challenge **KR BHARATH KUMAR REDDY AND ASTHIK BISWAS et al** INDIAN PEDIATRICS VOLUME 50__AUGUST 15, 2013

7. A study on substance abuse among school going male adolescents of Doiwala Block, District Dehradun. **Saxena, Vartika, et al., et al.** 2010, Indian Journal of Public Health. 10.4103/0019-557X.77260.

8. Socioeconomic , demographic data on substance abuse among students of professional college, Odisha state, Sachidananda mohanty et al volume 20, issue 8.

9. **Sinha, D. N., et al., et al.** Tobacco use among school personnel in Bihar, India. Tobacco control. 2002. 10.1136/tc.11.1.82.

10. Substance use disorder in adolescents_ Epidemiology, pathogenesis, clinical manifestations, course, assessment, and diagnosis - UpToDate.

11. **George.** poisoning book - psychiatry. 2010.

12. Youth alcohol drinking behavior: Associated risk and protective factors. **Guillén, Natalie, et al., et al.** 2015, Revista Iberoamericana de Psicologia y Salud. 10.1016/j.rips.2015.03.001.

13. **Rossow, Ingeborg.** Suicide, violence and child abuse: a review of the impact of alcohol consumption on social problems. 2000.

14. **Boomsma, D I, et al., et al.** A r el i gi ous upbr i ngi ng r educes the i nfl uence of geneti c factor s on di si nhi bi ti on: Evi dence for i nter acti on betw een genotype and envi r onment on per sonal i ty. 1369.

15. Patterns of excess alcohol consumption among school students in two english schools, Christopher J amritage, volume 24 issue 5

16. Prevalence and determinants of tobacco use in India: Evidence from recent global adult tobacco survey data. **Singh, Akansha and Ladusingh, Laishram.** 2014, PLoS ONE. 10.1371/ journal. pone.0114073.

17. Cannabis A Short Review Discussion Paper.

18. Amphetamines: Potent Recreational Drug of Abuse. **Uddin, Md Sahab, et al., et al.** 2017, Journal of Addiction Research & Therapy. 10.4172/2155-6105.1000330.

19. **Moreno, Megan A and Whitehill, Jennifer M.** Influence of Social Media on Alcohol Use in Adolescents and Young Adults.

20. The Demographics of Social Media Users. **Duggan, M., and Brenner, J.** Washington DC : s.n., 2012.

21. Users of the world, unite! The challenges and opportunities of social media. **Kaplan, A.M., and Haenlein, M.** s.l. : Business Horizons , 2010. 53(1):59–68,.

22. Teens, Social Media, and Privacy. **Madden, M.** Washington, DC : Pew Research Center, 2013a.

23. The Demographics of Social Media Users. **Duggan, M., and Brenner, J.** Washington, DC: : Pew Research Center, 2012 .

24. Role of the Pediatrician in Prevention and Management of Substance 1010 PEDIATRICS Vol. 91. 1993.

25. Sudden sniffing death. . **M, Bass.** s.l. : JAMA. , 1970, Vols. 212:2075-2079.

26. Admission to an approved treatment. **Maryland.** s.l. : Department of Health and Mental Hygiene, Drug and Alcohol, 1989, Vol. Maryland Chapter Newsletter.;II(2):15 .

27. Substance Abuse: A Guide for Health Professionals. **Schonberg SK.** s.l. : American Academy of Pediatrics, Center for Advanced Health Studies., 1988, Vols. 1-10.

28. White matter dementia in chronic inhalant abuse. . **Filley CM, Heaton RK, Rosenberg NL.** s.l. : Neurology., 1990, Vols. 40:532-534.

29. **Thomas, R. E., McLellan, J. and Perera, R.** Smoking prevention in schools: Does it work? Saudi Medical Journal. 2013. 10.1002/14651858.CD001293.pub3.

30. **Lsd, Including.** HALLUCINOGENS AND DISSOCIATIVE DRUGS Research Report Series.

31. Shehu, A. U. and Idris, S. H (2008). Marijuana smoking among secondary school students in Zaria, Nigeria: Factors responsible and effect. Annals of African Medicine, 7(4): 175-179.

32. **OJUGO, Augustine Itohan** Influence of Drug Abuse on School Attendance among Senior Secondary School Students in Uromi Metropolis Vol 6 Issue 2

33. **Tesfa Mekonen** Substance Use as a Strong Predictor of Poor academic Achievement among University Students Volume 2017, 9 pages.

SOP 03-V 3.0 / ANX 10-V 3.0

Institutional Human Ethics Committee

PSG Institute of Medical Sciences and Research, Coimbatore

Parental Consent Form

Title of Study:

Name of the Principal Investigator:

Department:

Your (son/daughter/child/infant/adolescent youth) is invited to participate in a study of (describe the study).

My name is _____and I am a _____ at PSG Institute of Medical Sciences and Research, Coimbatore. This study is (state how study relates to your program of work or your supervisor's program of work).

I am asking for permission to include your (son/daughter/child/infant/adolescent youth) in this study because

I expect to have …… (Number) participants in the study.
If you allow your child to participate, (state who will actually conduct the research) will (describe the procedures to be followed.)

Any information that is obtained in connection with this study and that can be identified with your (son/daughter/child/infant/adolescent youth) will remain confidential and will be disclosed only with your permission. His or her responses will not be linked to his or her name or your name in any written or verbal report of this research project.

Your decision to allow your (son/daughter/child/infant/adolescent youth) to participate will not affect your or his or her present or future relationship with PSGIMS&R or PSG Hospitals or (include the name of any other institution connected with this project). If you have any questions about the study, please ask me. If you have any questions later, call me at …… If you have any questions or concerns about your

(son/daughter/child/infant/adolescent youth)'s participation in this study, call……..

You may keep a copy of this consent form.

You are making a decision about allowing your (son/daughter/child/infant/adolescent youth) to participate in this study. Your signature below indicates that you have read the information provided above and have decided to allow him or her to participate in the study. If you later decide that you wish to withdraw your permission for your (son/daughter/child/infant/adolescent youth) to participate in the study, simply tell me.

You may discontinue his or her participation at any time. *This will not affect in any way your future treatment in this hospital.*

Printed Name of (son/daughter/child/infant/adolescent youth)

Signature of Parent(s) or Legal Guardian with Date Signature of Investigator with Date

Institutional Human Ethics Committee

PSG Institute of Medical Sciences and Research, Coimbatore

Why are we meeting with you?
We want to tell you about something we are doing called a research study. A research study is when doctors collect a lot of information to learn more about something related to health and disease. Dr N.JAYAMKONDAN and some other doctors are doing a study to learn more about the prevalence of smoking, alcohol and illicit drug usage among adolescent school children and effectiveness of health education. After we tell you about it, we will ask if you'd like to be in this study or not.

Why are we doing this study?
We want to find out how many adolescent school children are using these substances.
So we are getting information from lots of boys and girls like you.
In the whole study, there will be about 400 children.

What will happen to you if you are in this study?
Only if you agree, two things will happen:

1. You will need to answer some questions about using any of the above said substances and he will be assessed after a month.

Will this study hurt?
No it will not hurt

Will you get better if you are in this study?
No, this study won't make you feel better or get well. It will help to prevent other children like you using these substances.

Will everybody come to know about my condition? (Confidentiality)
We will not tell other people that you are in this research and we won't share information about you to anyone who does not work in the research study

Is this bad or dangerous for me? (Risks involved) : there is no risk involved

Do I get anything for being in the research?
You will be given health education

Will you tell me the results?
Results will not be shared with you or anyone.

Do you have any questions?
You can ask questions any time. You can ask now. You can ask later. You can talk to me or you can talk to someone else.

Do you have to be in this study?
No, you don't. No one will be mad at you if you don't want to do this. If you don't want to be in this study, just tell us. Or if you do want to be in the study, tell us that. And, remember, you can say yes now and change your mind later. It's up to you. *This will not affect in any way your future treatment in this hospital.*

Who can I talk to or ask questions to?
You can talk to me and my phone number is 7708664799

If you don't want to be in this study, just tell us. If you want to be in this study, just tell us. This will not affect in any way your future treatment in this hospital.
The doctor will give you a copy of this form to keep.

I have read this information, I have had my questions answered and know that I can ask questions later if I have them.

I agree to take part in the research

SIGNATURE OF PERSON CONDUCTING ASSENT DISCUSSION
I have explained the study to the child in language he/she can understand, and the child has agreed to be in the study.

_____ _____
Signature of Person Conducting Assent Discussion Date

_____
Name of Person Conducting Assent Discussion

பெற்றோர் ஒப்புதல் படிவம்

தலைப்பு: புகை, மது மற்றும் போதை பொருள் உபயோகிகும் மாணவர்களின் எண்ணிக்கை மற்றும் சுகாதார கல்வியின் பலன் – கோவை மாநகரம்

உங்கள் மகள் / மகன் இந்த ஆய்வுக்கு அழைக்கிறேன். நாண் புகை, மது மற்றும் போதை பொருள் உபயோகிக்கும் மாணவர்களின் எண்ணிக்கை மற்றும் சுகாதார கல்வியின் பலன் பற்றி கோவை மாநகரத்தில் ஆய்வு நடத்த உள்ளேன்.

என் பெயர் **Dr.** ஜெயம்கொண்டான், நான் **PSG** மருத்துவமணையில் குழந்தை நலப்பிரிவில் ஜூனியர் ரெஸிடண்ட்டாக பணிப்புரிகிறேண். இந்த ஆய்வு எனது படிப்பின் முழுமையான பூர்த்திக்கு அவசியமானதாக ஆகும்.

நான் உங்கள் மகன் / மகளை இந்த ஆய்வில் சேர்க்க உங்களது தேவை ஏனென்றால் எனது ஆய்வுக்கு 400 பங்கேர்ப்பாளர்கள் அவசியம்.

நீங்கள் அனுமதி அளித்தால், நாண் ஒரு கேள்வி படிவம் அளிப்பேன். பின்னர் ஒரு மாதத்திற்க்கு பிறகு மறு ஆய்வு நடத்தப்படும். உங்கள் குழந்தைப் பற்றி இந்த ஆய்வில் கண்டறியும் முடிவுகள் மிகவும் நம்பிக்கைக்குரியதாக வைக்கப்படும். உங்கள் அனுமதியின் பெயரில் மட்டும் வெளியிடப்படும். உங்கள் குழந்தைகளின் பதில்களோ அல்லது உங்கள் குழந்தைகளின் பெயரோ எழுத்து வடிவமாகவோ அல்லது வாய்வழியகவோ வெளிய்டப்படாது.

உங்கள் அனுமதியால் உங்களுக்கோ அல்லது உங்கள் பிள்ளைகளுக்கோ **PSG** மருத்துவமணைக்கும் உடனான உறவில் எந்த பாதிப்பும் எற்ப்படாது. உங்களுக்கு ஏதேனும் கேள்விகள் இருந்தால் என்னை தொடர்பு கொள்ளவும். உங்களுக்கு ஏதேனும் ஐயங்கள் இருந்தால் இந்த தொலைபேசி எண்ணை அழைக்கவும் 7708664799**,** உங்கள் குழந்தயின் பங்கேற்பில் எதேனும் சந்தேகம் உண்டேனில் இந்த எண்ணிற்க்கு 0422 – 2570170 அழைக்கவும்.

நீங்கள் இந்த படிவத்தின் நகலை வைத்துக் கொள்ளலாம். நீங்கள் உங்கள் மகன்/மகளை இதில் பங்கேற்க வேண்டுமென்று முடிவு செய்தால் உங்கள் கையெழுத்து அவசியம், உங்கள் கையெழுத்தின் பொருள் யாதெனில் நீங்கள் இந்த படிவத்தில் உள்ள தகவல்கள் அனைத்தயும் முழுமயாக படித்து உங்கள் மகன்/மகளை இதில் பங்கேற்க அனுமதி வழங்குவீர்கள் என அர்த்தம்.

பிற்க்காலத்தில் இந்த ஆய்வில் இருந்து உங்கள் மகன்/மகளை பங்கேற்க வேண்டாம் என்று எண்ணினால் எனக்கு அறிவிக்கவும். உங்கள் விருப்பமின்மையை எந்நேரம் வேண்டுமென்றாலும் தெற்விக்கவும். இது உங்கள் வருங்கால சிகிச்சை முறையை எந்த விதத்திலும் பாதிக்காது.

ஆய்வாளரின் கையொப்பம்

பெற்றோரின்/பாதுகாவலர் கையொப்பம்

தேதி

ASSENT FORM TAMIL

1. நாங்கள் ஏன் உங்களை சந்திக்கிறோம்?

   நாங்கள் உங்களுக்கு எங்கள் ஆய்வு குறித்து சொல்ல வேண்டும். ஆராய்ச்சி படிப்பு என்பது மருத்துவர்கள் பல விதமான தகவல்கலை அரோக்கியம் குறித்தும், நோய்கள் குறித்தும் படிப்பார்கள். **Dr.** ஜெயம்கொண்டான் மற்றும் சில மருத்துவர்கள் மது, புகை மற்றும் போதை தரும் வஸ்துக்கள் உபயோகிக்கும் மாணவர்களின் எண்ணிக்கை மற்றும் சுகாதார கல்வியின் பலன் பற்றி படிப்பார்கள். நாங்கள் இந்த ஆரய்ச்சி பற்றி அனைத்து தகவல்களையும் உங்களுக்கு தெரிவித்த பின் உங்கள் விருப்பம் பற்றி அறிவோம்.

2. நாங்கள் ஏன் இந்த ஆய்வினை செய்கிறோம்?

   புகை, மது மற்றும் போதை வஸ்துக்கள் உபயோகிகும் மாணவர்களின் எண்ணிக்கை பற்றி ஆய்வு செய்கிறோம். அதனால் பல குழந்தைகளிடம் இருந்து தகவல் பெறுகிறோம். எங்கள் மொத்த ஆய்வு 400 குழந்தைகள் கொண்டது.

3. நீங்கள் இந்த ஆய்வில் இருப்பதால் உங்களுக்கு என்ன ஆகும்?

   நீங்கள் புகை, மது மற்றும் போதை வஸ்துக்கள் உபயோகம் செய்தல் அல்ல அதை பற்றி சில கேள்விகளுக்கு பதிலளிக்க வேண்டும். பின்னர் ஒரு மாதத்திற்க்கு பிறகு மறு ஆய்வு நடத்தப்படும்.

4. நீங்கள் இந்த ஆய்வில் இருப்பதால் உங்களுக்கு லாபம் உண்டா?

   சுகாதார கல்வி விழிப்புணர்வு குழந்தைகளுக்கு வழங்கப்படும்

5. அனைவருக்கும் என் நிலை குறித்து தெரிய வருமா?

நீங்கள் இந்த ஆய்வில் கலந்து கொண்டீர்கள் என்பதை எவருக்கும் தெரிவிக்க மாட்டோம். மேலும் உங்களை பற்றிய தகவல்கள் இந்த ஆய்வில் கலந்து கொள்ளதவர்கள் எவருக்கும் தெரிவிக்கப்படாது.

6. இது உங்களுக்கு கெட்டதா அல்லது ஆபத்தானதா?

விளைவுகள் எதுவும் இல்லை

7. நாங்கள் உங்களுக்கு ஆய்வின் முடிவுகள் தெரிவிப்போமா?

இந்த ஆய்வின் முடிவுகளை, ஆராய்ச்சி காரணமாக எவருக்கும் தெரிவிக்க மாட்டோம்.

8. உங்களுக்கு ஏதேனும் கேள்விகள் உண்டா?

நீங்கள் எப்போது வேண்டுமென்றாலும் கேள்வி கேட்கலாம். நீங்கள் என்னிடமோ அல்லது மற்ற ஆய்வாளர்களிடம் பேசி தெரிந்து கொள்ளலாம்.

9. நீங்கள் இந்த ஆய்வில் இருக்க வேண்டுமா?

நீங்கள் இந்த ஆய்வில் இருக்க வேண்டும் என்ற அவசியம் இல்லை. உங்களுக்கு விருப்பமில்லை என்றால் எங்களுக்கு அறிவிக்கலாம். நீங்கள் இப்பொழுது ஒப்புக்கொண்டு பிற்க்கால்த்தில் வேண்டாம் என்றும் கூறலாம். இது உங்களின் தனிப்பட்ட விருப்பம். இது உங்களின் பிற்க்கால சிகிச்சைக்கு எந்த விதத்திலும் பாதிப்பு எற்ப்படாது.

எனக்கு பேச வேண்டுமென்றாலோ அல்லது கேள்வி கேட்க்க வேண்டுமென்றால் யாரை அணுகுவது?

உங்களுக்கு கேள்விகள் இருந்தாள் 7708664799 என்ற எண்ணிற்க்கு அழைக்கவும்.

உங்களுக்கு இந்த ஆய்வில் கலந்து கொள்ள வேண்டுமென்றாலும் அல்லது விருப்பமின்மயை எங்களுக்கு தெரிவிக்கவும். இது உங்கள் வருங்கால சிகிச்சை முறையை எந்த விதத்திலும் பாதிக்காது.

இந்த ஒப்புதல் படிவத்தின் நகலை உங்களுக்கும் ஒன்று கொடுப்போம்

விவாதம் நடத்துபவரின் கையொப்பம்

நான் இந்த ஆய்வினைப்பற்றி முழுமையாக விளக்கத்தை குழந்தையின் பெயர் தமிழில் புரியும்படியாக விவரித்துள்ளேன். அந்தக் குழந்தையும் கலந்துகொள்ள ஒப்புக்கொண்டுள்ளது

_____ _____

விவாதம் நடத்துபவரின் கையொப்பம் நாள்

_____

விவாதம் நடத்துபவரின் பெய்ர்

Age : Male/Female :

Class : School:

Questions :

Yes	No

1. Do you have idea about the substances used by adults, Eg: cigarettes, alcohol, marijuana

2. How did you come to know about these substances?

Exposure	Tick
Television	
Internet	
Watching movies	
Friends use them	
Parents use them	

3. Have you ever used/ had a wish to use these substances?

Used the above said substances	
Had the wish to use them	

4. In your life which of the following substances have you ever used?

Tobacco products(cigarette, pan, hans)	Yes	No
Alcohol (beer, brandy, whisky)	Yes	No
Cannabis (ghanja)	Yes	No
Inhalants(Nail polish, whitener)	Yes	No
Others	Yes	No

5. Which class were you in when you first began to use these substances?

   Please specify _____

6. Which was the first substance which you used first?

Substance	Tick

Tobacco (cigarette, tobacco chewing)	
Alcohol (beer, brandy, whisky)	
Cannabis(dope/marijuana)	
Inhalants(nail polish, whitener)	

Others please specify _____

7. In the past 3 months how often have you used the substances you have mentioned?

Substances	Never	Once or twice	weekly	Monthly	Daily or almost daily
Tobacco products					
Alcohol					
Cannabis					
Inhalants(nail polish, whitener)					
Others Specify_____					

8. In the past 3months how often has been your urge to use these substances?

Substances	Never	Once or twice	Weekly	Monthly	Daily or almost daily

Tobacco products					
Alcohol					
Cannabis					
Inhalants (nail polish, whitener)					
Others Specify_____					

9. During the past 3 months how often has your use of substances lead to health or financial problems?

Substances	Never	Once or twice	Weekly	Monthly	Daily or almost daily
Tobacco products					
Alcohol					
Cannabis					
Inhalants (nail polish, whitener)					
Others Specify_____					

10. During the past 3 months how often have you failed to do what was normally expected of you because of use of your drugs?

Substances	Never	Once or twice	Weekly	Monthly	Daily or almost daily

Tobacco products					
Alcohol					
Cannabis					
Inhalants (nail polish, whitener)					
Others Specify_____					

11. What reason was a main influence for you to use these substances?

Exposure	Tick
Television	
Internet	
Watching movies (actors usage)	
Friends use them	
Parents use them	

12. Have you ever tried to stop using these substances and failed?

Substances	Never	In last 3 months	In last one year

Tobacco products			
Alcohol			
Cannabis			
Inhalants(nail polish, whitener)			
Others Specify_____			

Post health education

Age : Male/Female :

Class : School:

Questions :

1. In your life which of the following substances have you ever used?

Tobacco products(cigarette, pan, hans)	Yes	No
Alcohol (beer, brandy, whisky)	Yes	No
Cannabis (ghanja)	Yes	No
Inhalants(Nail polish, whitener)	Yes	No
Others	Yes	No

2. In the past 1 month how often have you used the substances you have mentioned?

Substances	Never	Once or twice	weekly	Monthly	Daily or almost daily
Tobacco products					
Alcohol					
Cannabis					
Inhalants(nail polish, whitener)					
Others Specify_____					

3. In the past 1month how often has been your urge to use these substances?

Substances	Never	Once or twice	Weekly	Monthly	Daily or almost daily
Tobacco products					
Alcohol					
Cannabis					
Inhalants (nail polish, whitener)					
Others Specify_____					

4. During the past 1 months how often has your use of substances lead to health or financial problems?

Substances	Never	Once or twice	Weekly	Monthly	Daily or almost daily
Tobacco products					
Alcohol					
Cannabis					
Inhalants (nail polish, whitener)					
Others Specify_____					

5. Have you ever tried to stop using these substances and failed?

Substances	Never	In last 3	In last one

		months	year
Tobacco products			
Alcohol			
Cannabis			
Inhalants(nail polish, whitener)			
Others Specify_____			

S.NO	Age	Sex	class	school	idea	exposure	used/wish	substance used	beginning class	substance first used	usage in 3months	urge for use	health/financial	failed work	influence	stopped using
901	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
902	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
903	2	1	1	2	1	2	0	0	0	0	0	0	0	0	0	0
904	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
905	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
906	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
907	2	1	1	2	1	2	0	0	0	0	0	0	0	0	0	0
908	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
909	2	1	1	2	1	4	1	1	2	1	2	1	2	2	3	2
910	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
911	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
912	2	1	1	2	1	2	0	0	0	0	0	0	0	0	0	0
913	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
914	2	1	1	2	1	5	0	0	0	0	0	0	0	0	0	0
915	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
916	2	1	1	2	1	1	1	1	1	1	2	2	2	2	1	2
917	2	1	1	2	1	4	0	0	0	0	0	0	0	0	0	0
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919	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
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923	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
924	1	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
925	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
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936	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
937	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
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939	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
940	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
941	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
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946	1	1	1	2	1	4	0	0	0	0	0	0	0	0	0	0
947	2	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
948	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
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950	2	1	1	2	1	1	2	0	0	0	0	0	0	0	0	0
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954	2	1	1	2	1	3	0	0	0	0	0	0	0	0	0	0
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980	2	2	1	2	1	1	0	0	0	0	0	0	0	0	0	0
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987	2	2	1	2	1	3	0	0	0	0	0	0	0	0	0	0
988	2	2	1	2	1	3	0	0	0	0	0	0	0	0	0	0
989	2	2	1	2	1	3	0	0	0	0	0	0	0	0	0	0
990	2	2	1	2	1	2	0	0	0	0	0	0	0	0	0	0
991	2	2	1	2	1	3	0	0	0	0	0	0	0	0	0	0
992	1	2	1	2	1	3	0	0	0	0	0	0	0	0	0	0
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